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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,118	09/04/2001	Takaharu Hutamura	11-058	1726

23400 7590 05/21/2003

POSZ & BETHARDS, PLC  
11250 ROGER BACON DRIVE  
SUITE 10  
RESTON, VA 20190

EXAMINER

NGUYEN, DANNY

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/944,118

Applicant(s)

HUTAMURA ET AL.

Examiner

Danny Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 March 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The formal drawings filed on 10/30/2001 are accepted.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1, 5, 6, 10, 11, 15 are rejected under 35 U.S.C. 102(a) as being anticipated by Nguyen (USPN 6,069,471).

Regarding to claims 1, 6, 11, Nguyen discloses a drive circuit for driving a switching element (see figures 1 and 2) comprises a high-side switching circuit (112) connected between power supply line (Vdc); a low-side switching circuit (114) connected in series with the high-side switching circuit through an output terminal (110); a voltage detector (106) detecting a voltage appearing at the output terminal (110), wherein the low-side switching circuit is controlled to be turned off when the voltage detected by the voltage detector is lower than the predetermined value of the switching element (114)(see col. 1, lines 59-60), and wherein the high-side switching circuit is turned off when the voltage detected by the voltage detector is higher than a predetermined threshold (see cols 1 and 2, lines 54-3).

Regarding to claims 5, 10, 15, Nguyen discloses the voltage detector is implemented by a voltage divider (resistors 351 and 352).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-4, 7-9, 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen in view of Kato (USPN 6,316,999). Nguyen discloses the low-side switching, and the high side switching circuits (112, 114) include a comparing circuit (310) comparing the output voltage detected by the voltage detector with the off state decision voltage, and a logic circuit (308), a pre-driver (320), a decision transistor (312). Nguyen does not disclose an output transistor. Kato discloses an output transistor (including M70 and M70a shown in figures 1 and 2). It would have been obvious to one having skill in the art to combine the circuit of Nguyen with an output transistor in order to prevent both high and low transistor being off at the same time (Kato, col. 17, lines 28-30).

***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danny Nguyen whose telephone number is (703)-305-5988. The examiner can normally be reached on Mon to Fri 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (703)-308-3119. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703)-872-9318 for regular communications and (703)-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.

DN

DN

May 16, 2003



BRIAN SIRCUS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800